FRANKLIN GRAY PATENTS, LLC
ROBERT H. FRANTZ, REGISTERED US PATENT AGENT

RECEIVED
CENTRAL FAX CENTER

OCT 1 9 2005

FACSIMILE TRANSMISSION

TO: Examiner Andre R. Fowlkes
U.S. Patent and Trademark Office
GAU   2192
Fax: 571-273-8300 (Central Fax Server)

FROM: Robert H. Frantz
Franklin Gray Patents, LLC
Tel: 405-812-5613
Fax: 405-440-2465

Re-transmitting
Previous transmission
was incomplete.

DATE: Oct. 19, 2005

PAGES: 25 (inclusive)

In re the Application of:

Steven Edward Atkin   )

Serial Number: 09/838,377   )

Docket Number: AUS920010277US1   )

Filed on: 04/19/2001   )

For: "Bi-Directional Display"   )

Group: 2192

Examiner: Andre R. Fowlkes

RECEIVED
OIPE/IAP

OCT 2 0 2005

Certificate of Transmission under 37 CFR §1.8
I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office on:

DATE: _Oct. 19, 2005_

SIGNATURE: _Robert Frantz_

Robert H. Frantz, Reg. No. 42,553

NOTICE:

The information contained in this facsimile transmission is confidential. If you have received this transmission in error, please contact the sender immediately and destroy your copy.

Effective on 12/08/2004. *Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).* # FEE TRANSMITTAL ## For FY 2005	**Complete if Known**	
	Application Number	09/838,377
	Filing Date	04/19/2001
	First Named Inventor	Steven Edward Atkin
☐ Applicant claims small entity status. See 37 CFR 1.27	Examiner Name	Andre R. Fowlkes
	Art Unit	2192
TOTAL AMOUNT OF PAYMENT ($) 500.00	Attorney Docket No.	AUS920010277US1

RECEIVED CENTRAL FAX CENTER OCT 19 2005

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify):_____

☑ Deposit Account   Deposit Account Number: 09-0447_____   Deposit Account Name: Int'l Business Machines_____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below   ☐ Charge fee(s) indicated below, **except for the filing fee**

☑ Charge any additional fee(s) or underpayments of fee(s)   ☑ Credit any overpayments
under 37 CFR 1.16 and 1.17

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 20 or HP =	_____ x	_____ =	_____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP =	_____ x	_____ =	_____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims

Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ / 50 =	_____ (round up to a whole number) x	_____ =	_____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	_____
Other (e.g., late filing surcharge): Filing a Brief in support of an Appeal 41.20(b)(2)	$500.00

SUBMITTED BY

Signature	*Robert Frantz*	Registration No. (Attorney/Agent) 42,553	Telephone 405-812-5613
Name (Print/Type) Robert H. Frantz			Date Oct. 19, 2005

In the United States Patent and Trademark Office

In re the Application of:

Steven Edward Atkin	)	
Serial Number: 09/838,377	)	Group: 2122
Docket Number: AUS920010277US1	)	Examiner: Andre R. Fowlkes
Filed on: 04/19/2001	)	
For: "Bi-Directional Display"	)	

APPEAL BRIEF

Real Party in Interest per 37 CFR §41.37(c)(1)(i)

The subject patent application is owned by International Business Machines Corporation of Armonk, NY.

Related Appeals and Interferences per 37 CFR §41.37(c)(1)(ii)

None.

Status of Claims per 37 CFR §41.37(c)(1)(iii)

Claims 1 - 30 were originally filed in the application. Claims 3, 13, and 23 were cancelled by applicant's amendment on January 19, 2005. Claims 1, 2, 4 - 12, 14 - 22, and 24 - 30 were finally rejected in the Office Action dated May 20, 2005. The rejections of Claims 1, 2, 4 - 12, 14 - 22, and 24 - 30 were appealed on August 22, 2005.

Status of Amendments after Final Rejections per 37 CFR §41.37(c)(1)(iv)

No amendments to the claims have been submitted or entered after final rejections.

Summary of the Claimed Subject Matter per 37 CFR §41.37(c)(1)(v)

Claims 1, 11, and 21 are independent claims from which all other claims depend. Appellant's invention provides a method and system which converts a logically ordered character stream into a character stream suitable for display by a computer and comprehension by a user for purposes of displaying information in one or more languages, where the languages may have differing orders of character display (e.g. left to right, right to left, etc.). Each logically ordered character stream has a plurality of characters and control codes contained within it.

More specifically, our invention comprises a method and system which:

(a)   assigns bidirectional attributes to such a logically ordered character stream (pg. 25 lines 10 - 12, pg. 29 lines 11 - 14, Table 11);

(b)   assigns initial level numbers while honoring any directional overrides by explicit processing (pg. 25 lines 13 - 15, pg. 29 lines 14 - 16, Table 11);

(c)   changes attribute types based upon surrounding attribute types through weak and neutral processing (pg. 25 lines 14 - 16, pg. 29 lines 16 - 17, Table 11);

(d)   associates final level numbers to the logical character stream through implicit processing (pg. 25 lines 16 - 17, Table 11); and

(e)   reorders the characters within the logical character stream according to the final level numbers such that the reordered characters form a character stream in display order (pg. 25 lines 17 - 18, pg. 29 lines 17 - 18, Table 11),

(f)   wherein facets of layout relating to character reordering and facets related to character stream rendering are handled separately in a functional programming language, and said character stream is handled as sequential runs of integers during said steps of assigning attributes, level numbers, changing, attribute types, associating final level numbers, and reordering characters (pg. 23 lines 19 - 21, pg. 25 lines 19 - 22, pg. 30 lines 14 - 16, pg. 32 line 20 - pg. 33 line 6, and Table 11).

Grounds for Rejection For Which Review is Sought per 37 CFR §41.37(c)(1)(vi)

Review by the Board of the rejections of Claims 1, 2, 4 - 12, 14 - 22, and 24 - 30 under 35 U.S.C. §103(a) as being unpatentable over non-patent publication "Implementations of Bidirectional Reordering Algorithms", Florida Tech Technical Report CS-2000-1, by Steven Atkin and Ryan Stansifer (hereinafter "Atkin-Stansifer") in view of non-patent publication "FAQ for comp.lang.functional" by Hutton (hereinafter "Hutton") is requested.

Arguments per 37 CFR §41.37(c)(1)(vii)

Rejections of Claims 1, 11 and 21 under 35 U.S.C. §103(a) over Atkin-Stansifer in view of Hutton

The Atkin-Stansifer publication is the work of the Appellant, Steven Edward Atkin, which was produced during course work while attending Florida Institute of Technology. Dr. Stansifer was appellant's faculty advisor, and as such, acted as reviewer, commenter, and editor for the paper, but otherwise did not contribute to the technical details of the problem recognition and solution as set forth in the paper. Therefore, Dr. Stansifer is a co-author of the cited paper, but is not a co-inventor for the present patent application.

Appellant supplies herewith an affidavit under 37 C.F.R. §1.132 to place into evidence the facts that the cited Atkin-Stansifer paper is the work of the appellant, including evidence of conception of the claimed invention prior to the publication date afforded by Examiner to the Atkin-Stansifer paper in the form of a date-stamped JAVA file and code listing.

Such a showing of fact by appellant is sufficient to overcome a cited reference under 35 U.S.C. 102(a). *In re DeBaun*, 687 F.2d 459, 214 USPQ 933 (C.C.P.A. 1982), and *In re Katz*, 687 F.2d 450, 215 USPQ 14.

The Hutton reference taken alone fails to teach all of the claimed elements, steps, and limitations as set forth in the Office Action of May 20, 2005. For these reasons, Appellant requests reversal of the rejections of claims 1, 11, and 21.

Rejections of Claims 1, 11 and 21 under 35 U.S.C. §103(a) over Atkin-Stansifer in view of Hutton

Claims 2, and 4 - 10 depend from Claim 1; claims 12, and 14 - 20 depend from Claim 11; and claims 22, and 24 - 30 depend from Claim 11. As discussed in the foregoing arguments regarding the independent claims, the Atkin technical report is not available as prior art against appellant's claims.

The Hutton reference taken alone fails to teach all of the claimed elements, steps, and limitations as set forth in the Office Action of May 20, 2005. For these reasons, Appellant requests reversal of the rejections of claims 2, 4 - 10, 12, 14 - 20, 22, and 24 - 30.

Respectfully Submitted,

Robert Frantz

Agent for Appellant(s)
Robert H. Frantz, Reg. No. 42,553
Tel: (405) 812-5613

Franklin Gray Patents, LLC
P.O. Box 23324
Oklahoma City, OK 73127
Tel: 405-812-5613
Fax: 405-440-2465

Claims Appendix
per 37 CFR §41.37(c)(1)(viii)

Clean Form of Amended Claims

Claim 1 (previously amended):

A method of converting a logically ordered character stream into a character stream suitable for display by a computer and comprehension by a user, said logically ordered character stream having a plurality of characters and control codes contained within it, said method comprising:

assigning bidirectional attributes to a logical character stream;

assigning initial level numbers and honoring any directional overrides by explicit processing;

changing attribute types based upon surrounding attribute types through weak and neutral processing;

associating final level numbers to the logical character stream through implicit processing; and

reordering said characters within said logical character stream according to said final level numbers such that said reordered characters form a character stream in display order wherein facets of layout relating to character reordering and facets related to character stream rendering are handled separately in a functional programming language, and said character stream is handled as sequential runs of integers during said steps of assigning attributes, level numbers, changing, attribute types, associating final level numbers, and reordering characters.

Claim 2 (original):

The method as set forth in Claim 1 wherein said step of assigning bidirectional attributes further comprises obtaining said bidirectional attributes from a character database.

Claim 3 (canceled).

Claim 4 (original):

The method as set forth in Claim 1 wherein said step of changing attribute types based upon surrounding attribute types through weak and neutral processing in a functional programming language comprises providing blocks of functional programming language indexed by name weak type processing, neutral type processing, and implicit level processing such that said method may be readily used as a reference.

Claim 5 (original):

The method as set forth in Claim 1 wherein one or more steps are provided in Haskell functional language.

Claim 6 (original):

The method as set forth in Claim 1 wherein one or more steps are provided in Erlang functional language.

Claim 7 (original):

The method as set forth in Claim 1 wherein one or more steps are provided in SML functional language.

Claim 8 (original):

The method as set forth in Claim 1 wherein one or more steps are provided in Miranda functional language.

Claim 9 (original):

The method as set forth in Claim 1 wherein one or more steps are provided in Lisp functional language.

Claim 10 (original):

The method as set forth in Claim 1 wherein one or more steps are provided in Scheme functional language.

Claim 11 (previously amended):

A computer readable medium encoded with software causing a computer to perform the following actions:

receiving a logically ordered character stream;

assigning bidirectional attributes to the logical character stream;

assigning initial level numbers and honoring any directional overrides by explicit processing;

changing attribute types based upon surrounding attribute types through weak and neutral processing;

associating final level numbers to the logical character stream through implicit processing; and

reordering said characters within said logical character stream according to said final level numbers such that said reordered characters form a character stream in display order, wherein facets of layout relating to character reordering and facets related to character stream rendering are handled separately in a functional programming language, and said character stream is handled as sequential runs of integers during said steps of assigning attributes, level numbers, changing, attribute types, associating final level numbers, and reordering characters.

Claim 12 (original):

The computer readable medium as set forth in Claim 11 wherein said software for performing said assignment of bidirectional attributes further comprises software for obtaining said bidirectional attributes from a character database.

Claim 13 (canceled):

Claim 14 (original):

The computer readable medium as set forth in Claim 11 wherein said software for performing the action of changing attribute types based upon surrounding attribute types through weak and neutral processing in a functional programming language comprises software organized into blocks of functional programming language indexed by name weak type processing, neutral type processing, and implicit level processing such that said method may be readily used as a reference.

Claim 15 (original):

The computer readable medium as set forth in Claim 11 wherein said software is Haskell functional language.

Claim 16 (original):

The computer readable medium as set forth in Claim 11 wherein said software is Erlang functional language.

Claim 17 (original):

The computer readable medium as set forth in Claim 11 wherein said software is SML functional language.

Claim 18 (original):

The computer readable medium as set forth in Claim 11 wherein said software is Miranda functional language.

Claim 19 (original):

The computer readable medium as set forth in Claim 11 wherein said software is Lisp functional language.

Claim 20 (original):

The computer readable medium as set forth in Claim 11 wherein said software is Scheme functional language.

Claim 21 (previously amended):

A text code conversion system for converting logically ordered text streams and displaying said text streams in a display order, said system comprising:

a character stream receiver for receiving a logically ordered character stream;

a bidirectional attribute assignor realized for assigning bidirectional attributes to a received logical character stream;

an initial level assignor for assigning initial level numbers and for honoring any directional overrides by explicit processing;

an attribute type changer realized for changing attribute types based upon surrounding attribute types through weak and neutral;

a final level assignor realized for associating final level numbers to the logical character stream through implicit processing; and

a character resequencer realized for reordering said characters within said logical character stream according to said final level numbers such that said reordered characters form a character stream in display order, wherein facets of layout relating to character reordering and facets related to character stream rendering are handled separately, and said logically ordered character stream is handled as sequential runs of integers by said character stream receiver, said attribute assignor, said initial level assoignor, said type changer, said final level assignor, and said character resequencer, each of which are realized in a functional programming language.

Claim 22 (original):

The text code conversion system as set forth in Claim 21 wherein said bidirectional attributes assignor is adapted to obtain said bidirectional attributes from a character database.

Claim 23 (canceled).

Claim 24 (original):

   The text code conversion system as set forth in Claim 21 wherein said attribute type changer attribute type changer comprises blocks of functional programming language indexed by name weak type processing, neutral type processing, and implicit level processing such that said method may be readily used as a reference.

Claim 25 (original):

   The text code conversion system as set forth in Claim 21 wherein said bidirectional attribute assignor, initial level assignor, attribute type changer, final level assignor, and character resequencer comprise Haskell functional language.

Claim 26 (original):

   The text code conversion system as set forth in Claim 21 wherein said bidirectional attribute assignor, initial level assignor, attribute type changer, final level assignor, and character resequencer comprise Erlang functional language.

Claim 27 (original):

   The text code conversion system as set forth in Claim 21 wherein said bidirectional attribute assignor, initial level assignor, attribute type changer, final level assignor, and character resequencer comprise SML functional language.

Claim 28 (original):

   The text code conversion system as set forth in Claim 21 wherein said bidirectional attribute assignor, initial level assignor, attribute type changer, final level assignor, and character resequencer comprise Miranda functional language.

Claim 29 (original):

The text code conversion system as set forth in Claim 21 wherein said bidirectional attribute assignor, initial level assignor, attribute type changer, final level assignor, and character resequencer comprise Lisp functional language.

Claim 30 (original):

The text code conversion system as set forth in Claim 21 wherein said bidirectional attribute assignor, initial level assignor, attribute type changer, final level assignor, and character resequencer comprise Scheme functional language.

Evidence Appendix
per 37 CFR §41.37(c)(1)(ix)

Please see attached affidavit under 37 CFR §1.132, totaling 10 pages.

Related Proceedings Appendix
per 37 CFR §41.37(c)(1)(x)

No decisions have been rendered by a court or the Board in the related proceedings as identified under 37 CFR §41.37(c)(1)(ii).